



PCT/AU2004/000517

REC'D 11 MAY 2004

WIPO

PCT

Patent Office
Canberra

I, LEANNE MYNOTT, MANAGER EXAMINATION SUPPORT AND SALES hereby certify that annexed is a true copy of the Provisional specification in connection with Application No. 2003901887 for a patent by AMCOR LIMITED as filed on 22 April 2003.



WITNESS my hand this
Fourth day of May 2004

LEANNE MYNOTT
MANAGER EXAMINATION SUPPORT
AND SALES

BEST AVAILABLE COPY

PRIORITY DOCUMENT
SUBMITTED OR TRANSMITTED IN
COMPLIANCE WITH
RULE 17.1(a) OR (b)

AUSTRALIA

Patents Act 1990

PROVISIONAL SPECIFICATION

Applicant(s):

AMCOR LIMITED

A.C.N. 000 017 372

Invention Title:

A BAKING TRAY

The invention is described in the following statement:

- 2 -

A BAKING TRAY

The present invention relates to a tray for baking food products, such as cakes.

5

A number of baked food products, such as cakes, that are produced by bakeries are cut into smaller portions by the bakeries for sale at retail outlets. For commercial reasons, it is important that the cut portions be a uniform size and shape. Typically, bakeries cut baked products using precision cutting equipment, such as sonic and laser cutters, which are able to cut the products with a high degree of dimensional accuracy and produce sharp well-defined cuts. However, in order to produce cut portions of uniform size and shape it is important that the as-baked products be dimensionally accurate. The as-baked shapes of the products are directly related to the shapes of the trays in which the products are baked.

20

Metal baking trays, which are the main type of baking trays that are currently used in bakeries, can be made to a high degree of dimensional accuracy. However, traditionally, metal baking trays have tapered side walls and rounded corners to facilitate the manufacturing process of pressing the trays and to facilitate removing baked products from the trays. Thus, the baked products are not squared. Therefore, these metal baking trays are not adapted to bake products that can be cut into portions having a uniform size and shape.

25

It is known to manufacture metal baking trays with square side walls and square corners (rather than with tapered side walls and rounded corners). However, these trays do not nest and therefore there are issues with handling large numbers of the trays - as would be necessary in bakeries. In addition, it is relatively

30

\\msb_files\homs\GRM\Keep\BAKING TRAY-P49304.doc 17/04/03

- 3 -

difficult to remove baked products from these trays.

There have been proposals to use corrugated board baking trays as an alternative to metal baking trays.

5 However, the current proposals for such trays are not dimensionally accurate, with the result that there can be undesirable substantial variations in size and shape of portions cut from baked products made in these trays.

10 An object of the present invention is to provide a corrugated board baking tray that is capable of producing baked products with a high degree of dimensional accuracy.

15 The present invention provides a tray for baking food products that includes a rectangular (which term includes square) base, upright side walls, and upright end walls.

20 The tray is formed from a blank of a corrugated or any other suitable carton board material that includes a series of panels separated by fold lines.

25 The panels include a base panel that forms the base of the tray and side wall panels adjoining the base panel along opposite sides of the base panel. The side wall panels form the upright side walls of the tray.

30 The panels also include end wall panels adjoining the base panel at opposite ends of the base panel (hereinafter referred to as the "base flaps") and end wall panels adjoining the side wall panels at opposite ends of the side wall panels (hereinafter referred to as "side wall flaps"). The base and side wall flaps form the end
35 walls of the tray.

In use, in order to form a tray from a flat

\\mslb_files\home3\GPH\Xcep\BAKING TRAY-P49204.doc 17/04/03

- 4 -

blank, each side wall is formed by folding the side wall panels upwardly at the fold lines that separate the side wall panels and the base panels.

- 5 Thereafter, each end wall is formed by (a) folding the base flap at that end upwardly at the fold line that separates the base flap and the base panel and (b) folding the side wall flaps at that end inwardly at the fold lines that separate the side wall flaps and the side wall panels to bring the side wall flaps into contact with the upstanding base flap.
- 10

- 15 The action of folding the side wall flaps inwardly has the effect of bringing the upstanding side wall panels of the tray into contact with side edges of the upstanding base flap and thereby forming the corners between adjacent side and end walls.

- 20 The side wall flaps include locking tabs and the base flaps include slots that can receive the locking tabs when the base and side wall flaps are in folded positions and thereby hold the side wall flaps against the base flaps.

- 25 Preferably the locking assemblies formed by the locking tabs and the slots are formed so that the side wall flaps at each end of the tray are pulled inwardly towards each other and thereby force the side wall panels into close contact with the side edges of the upstanding base flaps when the locking tabs are positioned to extend into the slots. This feature contributes to forming the corners between the side and end walls.
- 30

- 35 Preferably adjacent base flaps and side wall flaps are partly joined together by gusset panels that form gusset corners in a lower section of the tray. The gusset corners prevent liquids in a baking mix and

\\\\wib_files\\homes\\CUM\\K260\\BAKING TRAY-749304.doc 17/04/03

- 5 -

generated during baking a food product from escaping from the tray. By confining the gusset corners to the lower section of the tray, the gusset corners do not interfere with the close contact between adjacent side and end walls at these corners of the tray that is achieved with the above-described arrangement of the base and side wall flaps.

Preferably the gusset corners extend no more than one third of the height of the tray.

The applicant has found that the above-described tray, and more particularly the end wall construction of the upwardly folded base flaps and the inwardly folded side wall flaps that are held together by the described locking assemblies, makes it possible to form straight and square corners between the side walls and the end walls of the tray.

In addition, the applicant has found that the locking assemblies formed by the locking tabs and the slots facilitate quick and easy erection of the tray from the flat blank. In addition, the locking assemblies can be quickly and easily unlocked so that one or both end walls can be "unfolded" to facilitate removal of cut portions of baked products from the tray and can then be "re-folded" and locked to re-form the end wall or walls to store remaining cut portions in the tray.

Preferably an upper edge of each side wall of the tray is formed by folding an upper section of the side wall panel outwardly and downwardly against an outer surface of a lower section of the side wall panel and gluing or otherwise holding the folded upper section against the outer surface.

Preferably an upper edge of each end wall of the

\\mslb_files\hoses\GRIFFITH\Krip\BAXING TRAY-943304.doc 17/04/03

- 6 -

tray is formed by folding an upper section of the base flap outwardly and downwardly against an outer surface of upper sections of the side wall flaps.

5 Preferably the slots in the base flaps are positioned so that the slots are on the upper edges of the end walls.

10 Preferably each side wall is inwardly concave along its length so that the side walls can flex outwardly to form side walls that are perpendicular to the base and perpendicular to the end walls as the food product in the tray expands during baking, thereby to form a squared food product.

15

The present invention is described further with reference to the accompanying drawings, of which:

20 Figure 1 is a perspective view of a preferred embodiment of a baking tray in accordance with the present invention;

25 Figure 2 is a top plan view of the tray shown in Figure 1 which illustrates the arrangement of the base flap and side wall flaps at one end of the tray prior to the flaps being folded upwardly and inwardly, respectively, to form that end wall of the tray; and

30 Figure 3 is a top plan view of a blank for forming the tray shown in Figures 1 and 2.

35 The baking tray shown in Figure 1 is formed from corrugated or any other suitable carton board which has (a) a bleached lining on the surfaces of the board that form the interior and an upper section of the exterior of the box, and (b) a heat resistant polyolefin coating on the bleached lining.

\\mesh_files\homes\DMU\Keep\BAKING TRAY.P49304.doc 17/04/03

- 7 -

The tray is orthogonal with a rectangular base 5, upright side walls 7, and upright end walls 9.

5 The side walls 7 and the end walls 9 are folded outwardly so that the upper edges of these walls form generally smooth surfaces.

10 The lower sections of the corners between adjacent side and end walls 7, 9 are formed as gusset corners to prevent the escape of liquids from the tray. These gusset corners extend only part way up the height of the tray.

15 As is described in more detail hereinafter, the tray is formed so that the corners between (a) the base 5 and the side walls 7, (b) the base 5 and the end walls 9, and (c) the side walls 7 and the end walls 9, are straight and square. This construction ensures that a baked
20 product produced in the tray has straight and square corners and straight sides and therefore has a high degree of dimensional accuracy. As is indicated above, this is an important consideration in terms of cutting the baked product into portions that have a uniform size and shape.

25 In addition to the above, the side walls 7 of the tray are inwardly concave along the length of the side walls 7 by a small amount to accommodate outward bulging of the side walls 7 as a food product is baked in the
30 tray.

 The tray is formed by folding the corrugated board blank shown in Figure 3. One face of the blank has the above-described bleached lining and heat resistant
35 polyolefin coating on the bleached lining.

With reference to Figure 3, the blank includes a

\\acib_files\home3\GRIFFITH\Bep\MAKING TRAY-D49304.doc 17/01/03

- 8 -

series of fold lines 11 that define a series of panels.

The panels include a base panel 5 that forms the base 5 of the tray.

5

The panels also include side wall panels 7a that adjoin the base panel 5 at opposite sides of the base panel 5 and side wall panels 7b that adjoin the side wall panels 7a. These side wall panels 7a, 7b form the side walls 7 of the tray.

10

The panels also include base flaps 9a that adjoin the base panel 5 at opposite sides of the base panel 5, base flaps 9b that adjoin the base flaps 9a, and side wall flaps 9c that adjoin the side wall flaps 7a at opposite sides of the side wall panels 7a. These flaps 9a, 9b, 9c, which can be collectively described as end wall flaps, form the end walls 9 of the tray.

15

The fold lines 11 between the pairs of base flaps 9a, 9b are scored part way along their length to form slots 15. In addition, the side wall flaps 9c include outwardly projecting tabs 17. As is described hereinafter, the slots 15 and the tabs 17 form locking assemblies that hold the end flaps 9a, 9b, 9c together to form the end walls 9 of the tray.

20

25

The panels also include gusset panels 21 that partly join together adjacent base flaps 9a and side wall flaps 9c to form the gusset corners 13.

30

The tray is formed from the blank by firstly folding the side wall panels 7b about the fold lines 11 that separate the pairs of side wall panels 7a and 7b so that the non-bleached faces of the side wall panels 7b contact the non-bleached faces of the side wall panels 7a and thereafter gluing the faces together. This step

35

\\mslb_files\done\GEN\Keep\BANKING TRAY-P42304.doc 17/01/03

- 9 -

produces side walls 7 with smooth upper edges.

5 The next step in erecting the tray is to fold the glued together side wall panels 7a, 7b upwardly about the fold lines 11 that separate the side wall panels 7a and the base panel 5 to form the upstanding side walls 7 of the tray.

10 Thereafter, the base flaps 9a, 9b are folded upwardly and inwardly to upstanding positions and the side wall flaps 9c are folded inwardly against the outwardly facing surfaces of the upstanding base flaps 9a. This movement of the side wall flaps 9c brings the upstanding side wall panels 7a into close contact with the side edges of the upstanding base flaps 9a and forms the corners between adjacent side walls 7 and end walls 9.

20 The base flaps 9a and side wall flaps 9c are held in contact by means of the above-described slots 15 and locking tabs 17. The positions of these components of locking assemblies are selected so that a step of folding the base flaps 9b outwardly and downwardly positions the slots 15 to form part of the upper edges of the end walls 9 and positions the locking tabs 17 to extend upwardly through the slots 15 so that the locking tabs 17 are retained by the slots.

30 The positions of the slots 15 and the locking tabs 17 are also selected so that it is necessary to force the side wall flaps 9c inwardly in order to align the locking tabs 17 carried by these flaps 9c to be received in the slots 15 and this inward movement further promotes close contact between the side walls 7 and the side edges of the upstanding base flaps 9a that form the corners.

35 The above-described tray can be formed without difficulty on conventional cutting, folding and gluing

\\msb_files\homes\GOW\keep\BAXING TRAY-P49308.doc 17/04/03

- 10 -

machinery.

Many modifications may be made to the preferred
embodiment of the tray without departing from the spirit
5 and scope of the invention.

\\salb_files\home\GEN\Keep\BANKING TRAY-048304.doc 17/04/03

Figure 1

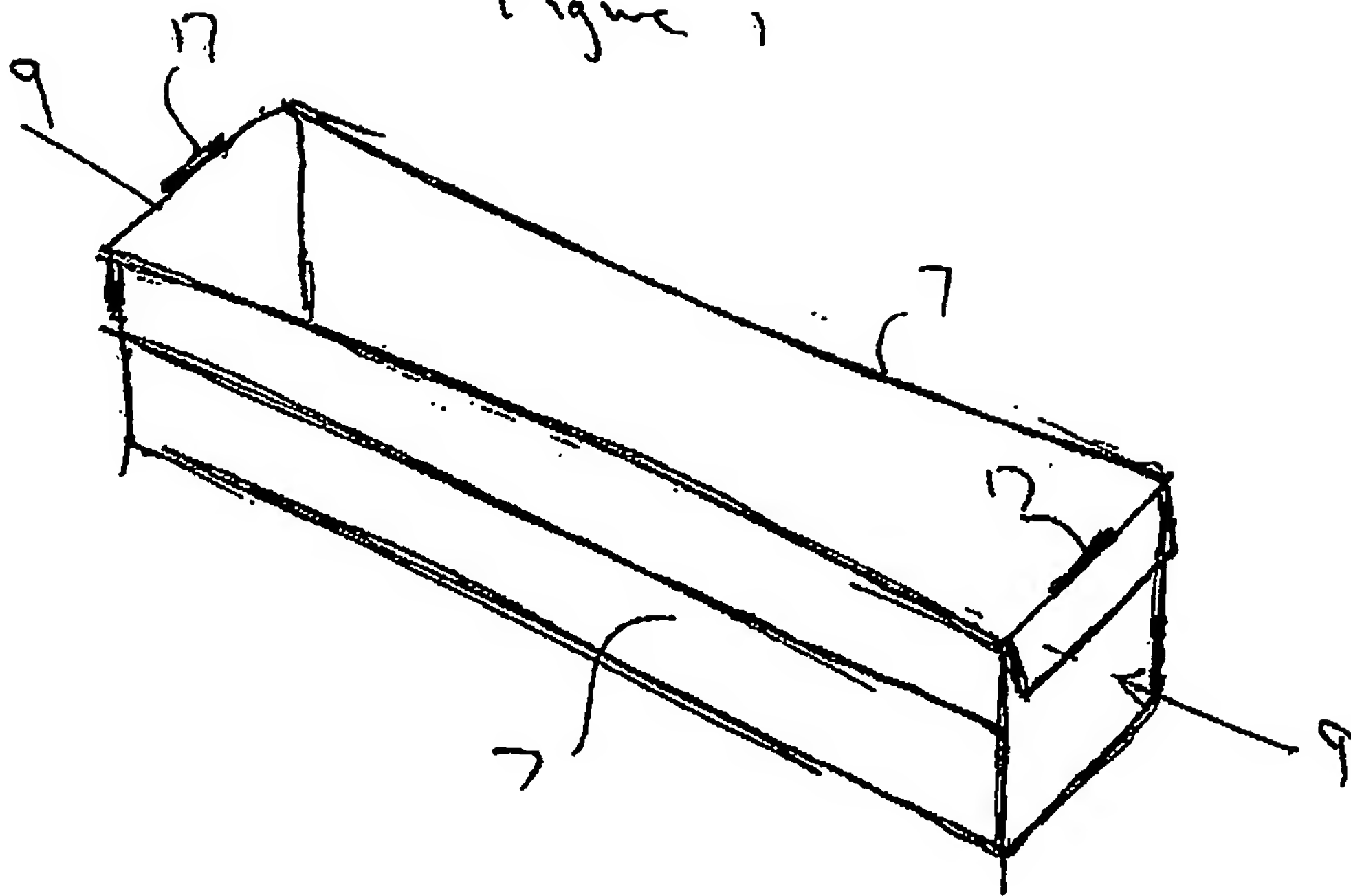


Figure 2

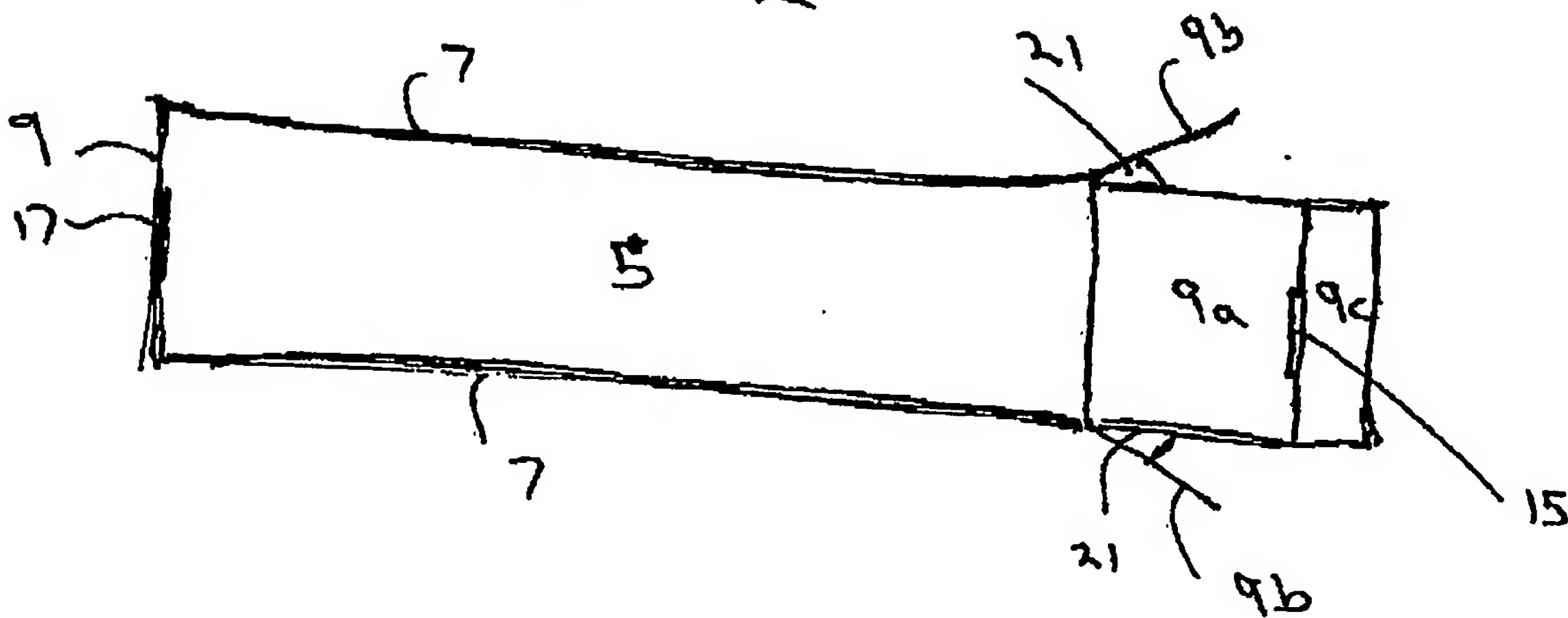
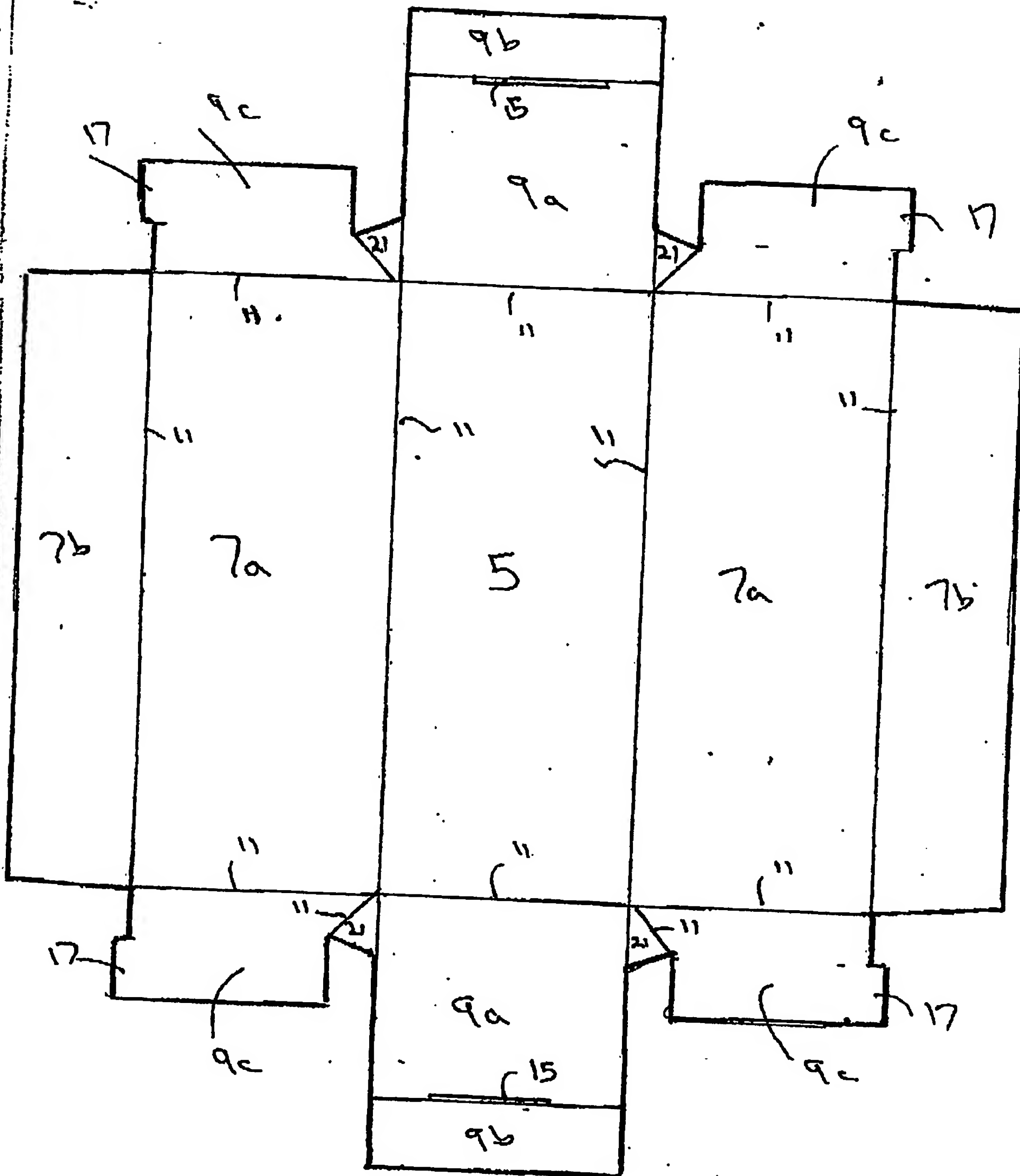


Figure 3



Commissioner of Patents
IP Australia
PO Box 200
WODEN ACT 2606

BY FACSIMILE

Fax Ref:	MP3
Date Faxed:	17.4.03

PATENT SCHEDULE

Patent No	
Name of Applicant	AYLOR LIMITED
Our Reference	GRM: BK: P49304
Purpose	New Provisional
Fee Paid (\$)	\$80 —

TOTAL PAID BY VISA

\$80 —

LODGED BY

Griffith Hack Patent & Trade Mark Attorneys
509 St Kilda Road
MELBOURNE VIC 3004

Ph 03 9243 8300
Fax 03 9243 8333

GH Office processing only:

Billed / Invoice No	
USD Scale Charge	
Card Name	NTB GRM
Prepared By (Mailroom)	STEWART LAN
Processed By (Accounts)	

Griffith Hack

C:\Documents and Settings\BKro\Local Settings\Temporary Internet Files\OLK227\Faxed Patents.doc

Page 1

17/04/03

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☒ BLACK BORDERS
 - ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
 - ☐ FADED TEXT OR DRAWING
 - ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
 - ☐ SKEWED/SLANTED IMAGES
 - ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
 - ☐ GRAY SCALE DOCUMENTS
 - ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
 - ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
-
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.